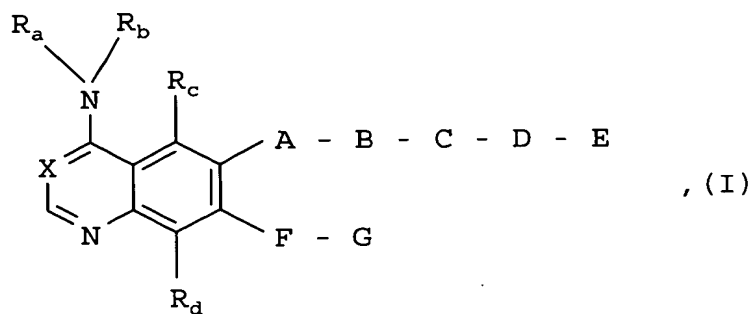


### Amendments to the Claims

Please amend the claims as shown below.

#### Claims 1-4 (cancelled)

**Claim 5 (previously presented):** A compound of the formula



wherein

$R_a$  denotes a hydrogen atom or a  $C_{1-4}$ -alkyl group,

$R_b$  denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups  $R_1$  to  $R_3$ , whilst

$R_1$  and  $R_2$ , which may be identical or different, in each case denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a  $C_{1-4}$ -alkyl, hydroxy,  $C_{1-4}$ -alkoxy,  $C_{3-6}$ -cycloalkyl,  $C_{4-6}$ -cycloalkoxy,  $C_{2-5}$ -alkenyl or  $C_{2-5}$ -alkynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a  $C_{3-5}$ -alkenyloxy or  $C_{3-5}$ -alkynyloxy group, wherein the unsaturated moiety may not be linked to the oxygen atom,

a C<sub>1-4</sub>-alkylsulphenyl, C<sub>1-4</sub>-alkylsulphinyl, C<sub>1-4</sub>-alkylsulphonyl, C<sub>1-4</sub>-alkylsulphonyloxy, trifluoromethylsulphenyl, trifluoromethylsulphinyl or trifluoromethylsulphonyl group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms,

an ethyl or ethoxy group substituted by 1 to 5 fluorine atoms,

a cyano or nitro group or an amino group optionally substituted by one or two C<sub>1-4</sub>-alkyl groups, wherein the substituents may be identical or different, or

R<sub>1</sub> together with R<sub>2</sub>, if they are bound to adjacent carbon atoms, denote a -CH=CH-CH=CH-, -CH=CH-NH or -CH=N-NH group and

R<sub>3</sub> denotes a hydrogen, fluorine, chlorine or bromine atom,

a C<sub>1-4</sub>-alkyl, trifluoromethyl or C<sub>1-4</sub>-alkoxy group,

R<sub>c</sub> and R<sub>d</sub>, which may be identical or different, in each case denote a hydrogen, fluorine or chlorine atom, a methoxy group, or a methyl group optionally substituted by a methoxy, dimethylamino, diethylamino, pyrrolidino, piperidino or morpholino group,

X denotes a methine group substituted by a cyano group or a nitrogen atom,

A denotes an oxygen atom or an -NH- group optionally substituted by a C<sub>1-4</sub>-alkyl group,

B denotes a carbonyl or sulphonyl group,

C denotes a 1,3-allenylene, 1,1 or 1,2-vinylene group which may be substituted in each case by one or two methyl groups or by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by 1 to 4 methyl groups or by a trifluoromethyl group,

D denotes an alkylene, -CO-alkylene or -SO<sub>2</sub>-alkylene group wherein the alkylene moiety in each case contains 1 to 8 carbon atoms and additionally 1 to 4 hydrogen atoms in the alkylene moiety may be replaced by fluorine atoms, whilst the linking of the -CO-alkylene and -SO<sub>2</sub>-alkylene group to the adjacent group C in each case must take place via the carbonyl or sulphonyl group,

a -CO-O-alkylene, -CO-NR<sub>4</sub>-alkylene or -SO<sub>2</sub>-NR<sub>4</sub>-alkylene group wherein the alkylene moiety in each case contains 1 to 8 carbon atoms, whilst the linking to the adjacent group C in each case must take place via the carbonyl or sulphonyl group wherein

C 1  
R<sub>4</sub> denotes a hydrogen atom or a C<sub>1-4</sub>-alkyl group,

or, if D is bound to a carbon atom of the group E, it may also denote a bond

or, if D is bound to a nitrogen atom of the group E, it may also denote a carbonyl or sulphonyl group,

E denotes an R<sub>6</sub>O-CO-alkylene-NR<sub>5</sub>, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-alkylene-NR<sub>5</sub> or (R<sub>7</sub>O-PO-R<sub>9</sub>)-alkylene-NR<sub>5</sub>-group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 6 carbon atoms, may additionally be substituted by one or two C<sub>1-2</sub>-alkyl groups or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, wherein

R<sub>5</sub> denotes a hydrogen atom,

a C<sub>1-4</sub>-alkyl group, which may be substituted by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>) or (R<sub>7</sub>O-PO-R<sub>9</sub>) group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups, which may be terminally substituted in each case by a C<sub>1-6</sub>-alkylcarbonylsulphenyl, C<sub>3-7</sub>-cycloalkylcarbonylsulphenyl, C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonylsulphenyl, arylcarbonylsulphenyl or aryl-C<sub>1-3</sub>-alkylcarbonylsulphenyl group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups which may be terminally substituted in each case by a C<sub>1-6</sub>-alkylcarbonyloxy, C<sub>3-7</sub>-cycloalkylcarbonyloxy, C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonyloxy, arylcarbonyloxy or aryl-C<sub>1-3</sub>-alkylcarbonyloxy group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups, each of which may be terminally substituted by a hydroxy, C<sub>1-4</sub>-alkoxy, amino, C<sub>1-4</sub>-alkylamino or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, whilst in the abovementioned 6- to 7-membered alkyleneimino groups a methylene group in the 4 position may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, imino or N-(C<sub>1-4</sub>-alkyl)-imino group,

C 1  
a C<sub>3-7</sub>-cycloalkyl or C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkyl group,

R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, in each case denote a hydrogen atom,

a C<sub>1-8</sub>-alkyl group, which may be substituted by a hydroxy, C<sub>1-4</sub>-alkoxy, amino, C<sub>1-4</sub>-alkylamino or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, whilst in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group in the 4 position may be replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl, imino or N-(C<sub>1-4</sub>-alkyl)-imino group,

a C<sub>4-7</sub>-cycloalkyl group optionally substituted by 1 or 2 methyl groups,

a C<sub>3-5</sub>-alkenyl or C<sub>3-5</sub>-alkynyl group, wherein the unsaturated part may not be linked to the oxygen atom,

a C<sub>3-7</sub>-cycloalkyl-C<sub>1-4</sub>-alkyl, aryl, aryl-C<sub>1-4</sub>-alkyl or R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>)-group, whilst

R<sub>e</sub> and R<sub>f</sub>, which may be identical or different, in each case denote a hydrogen atom or a C<sub>1-4</sub>-alkyl group and

R<sub>g</sub> denotes a C<sub>1-4</sub>-alkyl, C<sub>3-7</sub>-cycloalkyl, C<sub>1-4</sub>-alkoxy or C<sub>5-7</sub>-cycloalkoxy group,

and R<sub>9</sub> denotes a C<sub>1-4</sub>-alkyl, aryl or aryl-C<sub>1-4</sub>-alkyl group,

a 4- to 7-membered alkyleneimino group which may be substituted by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are as hereinbefore defined,

a 4- to 7-membered alkyleneimino group which is substituted by two R<sub>6</sub>OCO or R<sub>6</sub>OCO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>OCO-group and an R<sub>6</sub>OCO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is as hereinbefore defined,

C I a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and is additionally substituted at a cyclic carbon atom by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are as hereinbefore defined and

R<sub>10</sub> denotes a hydrogen atom, a C<sub>1-4</sub>-alkyl, formyl, C<sub>1-4</sub>-alkylcarbonyl or C<sub>1-4</sub>-alkylsulphonyl group,

a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and additionally at cyclic carbon atoms by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> and R<sub>10</sub> are as hereinbefore defined,

a piperazino or homopiperazino group which is substituted in each case in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are as hereinbefore defined,

a piperazino or homopiperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group and is additionally substituted at cyclic carbon atoms by one or two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are as hereinbefore defined,

a morpholino or homomorpholino group which is substituted in each case by an  $R_6O-CO$ ,  $(R_7O-PO-OR_8)$ ,  $(R_7O-PO-R_9)$ ,  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are as hereinbefore defined,

a morpholino or homomorpholino group which is substituted by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups or by an  $R_6O-CO$ -group and an  $R_6O-CO-C_{1-4}$ -alkyl group wherein  $R_6$  is as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , whilst the abovementioned 5- to 7-membered rings are additionally substituted in each case at a carbon atom by an  $R_6O-CO$ ,  $(R_7O-PO-OR_8)$ ,  $(R_7O-PO-R_9)$ ,  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_{10}$  are as hereinbefore defined,

C1 a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , while the abovementioned 5- to 7-membered rings are in each case additionally substituted at carbon atoms by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups or by an  $R_6O-CO$ -group and an  $R_6O-CO-C_{1-4}$ -alkyl group wherein  $R_6$  and  $R_{10}$  are as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group, while the abovementioned 5- to 7-membered rings are in each case additionally substituted at carbon atoms by one or two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups or by an  $R_6O-CO$ -group and an  $R_6O-CO-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are as hereinbefore defined,

a 2-oxo-morpholino group which may be substituted by 1 to 4  $C_{1-2}$ -alkyl groups,

a 2-oxo-thiomorpholino group which may be substituted by 1 to 4  $C_{1-2}$ -alkyl groups,

a morpholino or thiomorpholino group which is substituted in the 2 position by a C<sub>1-4</sub>-alkoxy group,

a morpholino or thiomorpholino group which is substituted in the 2 and 6 positions by a C<sub>1-4</sub>-alkoxy group,

a C<sub>1-4</sub>-alkyl-NR<sub>5</sub>-group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained and may additionally be substituted by one or two methyl groups, is in each case terminally substituted by a di-(C<sub>1-4</sub>-alkoxy)-methyl or tri-(C<sub>1-4</sub>-alkoxy)-methyl group, whilst R<sub>5</sub> is as hereinbefore defined,

C1 a C<sub>1-4</sub>-alkyl-NR<sub>5</sub>-group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained and may additionally be substituted by one or two methyl groups, is in each case terminally substituted by a 1,3-dioxolan-2-yl or 1,3-dioxan-2-yl group optionally substituted by one or two methyl groups, while R<sub>5</sub> is as hereinbefore defined,

an R<sub>11</sub>NR<sub>5</sub>-group wherein R<sub>5</sub> is as hereinbefore defined and

R<sub>11</sub> denotes a 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl, 2-oxo-tetrahydropyran-5-yl, 2-oxo-tetrahydrothiophen-3-yl, 2-oxo-tetrahydrothiophen-4-yl, 2-oxo-tetrahydrothiopyran-3-yl, 2-oxo-tetrahydrothiopyran-4-yl or 2-oxo-tetrahydrothiopyran-5-yl group optionally substituted by one or two methyl groups,

or D together with E denotes an R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>)-O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>) or (R<sub>7</sub>O-PO-R<sub>9</sub>)-group wherein R<sub>e</sub> to R<sub>g</sub> and R<sub>7</sub> to R<sub>9</sub> are as hereinbefore defined,

F and G together denote a hydrogen atom,

a C<sub>1-6</sub>-alkoxy group optionally substituted from position 2 onwards by a hydroxy or C<sub>1-4</sub>-alkoxy group,

a C<sub>3-7</sub>-cycloalkoxy or C<sub>3-7</sub>-cycloalkyl-C<sub>1-4</sub>-alkoxy group,

whilst by the aryl moieties mentioned in the definitions of the abovementioned groups is meant a phenyl group which in each case may be monosubstituted by R<sub>12</sub>, mono-, di- or

trisubstituted by  $R_{13}$  or monosubstituted by  $R_{12}$  and additionally mono- or disubstituted by  $R_{13}$ , whilst the substituents may be identical or different and

$R_{12}$  denotes a cyano, carboxy,  $C_{1-4}$ -alkoxycarbonyl, aminocarbonyl,  $C_{1-4}$ -alkylaminocarbonyl, di- $(C_{1-4}$ -alkyl)-aminocarbonyl,  $C_{1-4}$ -alkylsulphenyl,  $C_{1-4}$ -alkylsulphinyl,  $C_{1-4}$ -alkylsulphonyl, hydroxy,  $C_{1-4}$ -alkylsulphonyloxy, trifluoromethyloxy, nitro, amino,  $C_{1-4}$ -alkylamino, di- $(C_{1-4}$ -alkyl)-amino,  $C_{1-4}$ -alkyl-carbonylamino, N- $(C_{1-4}$ -alkyl)- $C_{1-4}$ -alkylcarbonylamino,  $C_{1-4}$ -alkylsulphonylamino, N- $(C_{1-4}$ -alkyl)- $C_{1-4}$ -alkylsulphonylamino, aminosulphonyl,  $C_{1-4}$ -alkylaminosulphonyl or di- $(C_{1-4}$ -alkyl)-aminosulphonyl group or a carbonyl group, which is substituted by a 5- to 7-membered alkyleneimino group, wherein in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group in the 4 position may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, imino or N- $(C_{1-4}$ -alkyl)-imino-group, and

$R_{13}$  denotes a fluorine, chlorine, bromine or iodine atom, a  $C_{1-4}$ -alkyl, trifluoromethyl or  $C_{1-4}$ -alkoxy group or

two groups  $R_{13}$ , if they are bound to adjacent carbon atoms, together denote a  $C_{3-5}$ -alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

**Claim 6 (previously presented):** A compound of the formula I according to claim 5, wherein

$R_a$  denotes a hydrogen atom,

$R_b$  denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups  $R_1$  to  $R_3$ , while



$R_1$  and  $R_2$ , which may be identical or different, each denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a methyl, ethyl, hydroxy, methoxy, ethoxy, amino, cyano, vinyl or ethynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms or

$R_1$  together with  $R_2$ , if they are bound to adjacent carbon atoms, denote a  $-\text{CH}=\text{CH}-\text{CH}=\text{CH}-$ ,  $-\text{CH}=\text{CH}-\text{NH}$  or  $-\text{CH}=\text{N}-\text{NH}$  group and

$R_3$  denotes a hydrogen, fluorine, chlorine or bromine atom,

$R_c$  and  $R_d$  in each case denote a hydrogen atom,

X denotes a methine group substituted by a cyano group or a nitrogen atom,

A denotes an  $-\text{NH}-$  group optionally substituted by a methyl or ethyl group,

B denotes a carbonyl group,

C denotes a 1,1- or 1,2-vinylene group which is substituted in each case by one or two methyl groups or may be substituted by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

D denotes an alkylene or  $-\text{CO}-$ alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking of the  $-\text{CO}-$ alkylene group to the adjacent group C in each case must take place via the carbonyl group,

a -CO-O-alkylene or -CO-NR<sub>4</sub>-alkylene- group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking to the adjacent group C in each case must take place via the carbonyl group wherein

R<sub>4</sub> denotes a hydrogen atom or a methyl or ethyl group,

or, if D is bound to a carbon atom of the group E, it may also denote a bond

or, if D is bound to a nitrogen atom of the group E, it may also denote a carbonyl or sulphonyl group,

E denotes an R<sub>6</sub>O-CO-alkylene-NR<sub>5</sub>, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-alkylene-NR<sub>5</sub> or (R<sub>7</sub>O-PO-R<sub>9</sub>)-alkylene-NR<sub>5</sub> group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 4 carbon atoms, may additionally be substituted by one or two C<sub>1-2</sub>-alkyl groups or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while

R<sub>5</sub> denotes a hydrogen atom,

a C<sub>1-4</sub>-alkyl group which may be substituted by an R<sub>6</sub>O-CO group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups which is terminally substituted in each case by a hydroxy, C<sub>1-4</sub>-alkoxy, di-(C<sub>1-4</sub>-alkyl)amino, C<sub>1-6</sub>-alkylcarbonylsulphenyl, C<sub>3-6</sub>-cycloalkylcarbonylsulphenyl, C<sub>3-6</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonylsulphenyl, arylcarbonylsulphenyl or aryl-C<sub>1-3</sub>-alkylcarbonylsulphenyl group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups which is terminally substituted in each case by a C<sub>1-6</sub>-alkylcarbonyloxy, C<sub>3-6</sub>-cycloalkylcarbonyloxy, C<sub>3-6</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonyloxy, arylcarbonyloxy or aryl-C<sub>1-3</sub>-alkylcarbonyloxy group,

a C<sub>3-6</sub>-cycloalkyl or C<sub>3-6</sub>-cycloalkyl-C<sub>1-3</sub>-alkyl group,

R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, in each case denote a hydrogen atom,

a C<sub>1-8</sub>-alkyl group which may be substituted by a hydroxy, C<sub>1-4</sub>-alkoxy, or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, while in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group in the 4 position may be replaced by an oxygen atom or by an N-(C<sub>1-2</sub>-alkyl)-imino group,

a C<sub>4-6</sub>-cycloalkyl group,

a C<sub>3-5</sub>-alkenyl or C<sub>3-5</sub>-alkynyl group, while the unsaturated moiety may not be linked to the oxygen atom,

a C<sub>3-6</sub>-cycloalkyl-C<sub>1-4</sub>-alkyl, aryl, aryl-C<sub>1-4</sub>-alkyl or R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>) group, while

R<sub>e</sub> and R<sub>f</sub>, which may be identical or different, in each case denote a hydrogen atom or a C<sub>1-4</sub>-alkyl group and

R<sub>g</sub> denotes a C<sub>1-4</sub>-alkyl, C<sub>3-6</sub>-cycloalkyl, C<sub>1-4</sub>-alkoxy or C<sub>5-6</sub>-cycloalkoxy group,

and R<sub>9</sub> denotes a C<sub>1-4</sub>-alkyl group,

a 4- to 7-membered alkyleneimino group which is substituted by an R<sub>6</sub>O-CO, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is as hereinbefore defined,

a 4- to 7-membered alkyleneimino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups wherein R<sub>6</sub> is as hereinbefore defined,

a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and additionally at a cyclic carbon atom by an R<sub>6</sub>O-CO, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is as hereinbefore defined and

R<sub>10</sub> denotes a hydrogen atom, a methyl or ethyl group,

a piperazino or homopiperazino group which is substituted in the 4 position by the group  $R_{10}$  and is additionally substituted at cyclic carbon atoms by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  and  $R_{10}$  are as hereinbefore defined,

a piperazino or homopiperazino group which is substituted in each case in the 4 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are as hereinbefore defined,

a piperazino or homopiperazino group which is substituted in the 4 position by an  $R_6O-CO-C_{1-4}$ -alkyl or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group and is additionally substituted at cyclic carbon atoms by one or two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  is as hereinbefore defined,

C1  
a morpholino or homomorpholino group which is substituted in each case by an  $R_6O-CO$ ,  $R_6O-CO-C_{1-4}$ -alkyl, or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group wherein  $R_6$  is as hereinbefore defined,

a morpholino or homomorpholino group which is substituted by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  is as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , while the abovementioned 5- to 7-membered rings in each case are additionally substituted at a carbon atom by an  $R_6O-CO$ ,  $R_6O-CO-C_{1-4}$ -alkyl or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group wherein  $R_6$  and  $R_{10}$  are as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , while the abovementioned 5- to 7-membered rings in each case are additionally substituted at carbon atoms by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  and  $R_{10}$  are as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are as hereinbefore defined,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group, while the abovementioned 5- to 7-membered rings in each case are additionally substituted at carbon atoms by one or two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  is as hereinbefore defined,

a 2-oxo-morpholino group which may be substituted by 1 to 4  $C_{1-2}$ -alkyl groups,

a 2-oxo-thiomorpholino group which may be substituted by 1 to 4  $C_{1-2}$ -alkyl groups,

a morpholino group which is substituted in the 2 position by a  $C_{1-4}$ -alkoxy group,

a morpholino group which is substituted in the 2 and 6 positions in each case by a  $C_{1-4}$ -alkoxy group,

a  $C_{1-4}$ -alkyl- $NR_5$  group wherein the  $C_{1-4}$ -alkyl moiety, which is straight-chained, is terminally substituted by a di- $(C_{1-4}$ -alkoxy)-methyl group, while  $R_5$  is as hereinbefore defined,

a  $C_{1-4}$ -alkyl- $NR_5$  group wherein the  $C_{1-4}$ -alkyl moiety, which is straight-chained, is terminally substituted by a 1,3-dioxolan-2-yl or 1,3-dioxan-2-yl group, while  $R_5$  is as hereinbefore defined,

a  $R_{11}NR_5$  group wherein  $R_5$  is as hereinbefore defined and

$R_{11}$  denotes a 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl, 2-oxo-tetrahydropyran-5-yl, 2-oxo-tetrahydrothiophen-3-yl, 2-oxo-tetrahydrothiophen-4-yl, 2-oxo-tetrahydrothiopyran-3-yl, 2-oxo-tetrahydrothiopyran-4-yl or 2-oxo-tetrahydrothiopyran-5-yl group optionally substituted by one or two methyl groups,

or D together with E denotes an  $R_gCO-O-(R_eCR_f)-O-CO$  or  $(R_7O-PO-OR_8)$  group wherein  $R_e$  to  $R_g$  and  $R_7$  to  $R_9$  are as hereinbefore defined,

F and G together denote a hydrogen atom,

a C<sub>1-6</sub>-alkoxy group optionally substituted from position 2 by a hydroxy or C<sub>1-4</sub>-alkoxy group,

a C<sub>4-7</sub>-cycloalkoxy or C<sub>3-7</sub>-cycloalkyl-C<sub>1-4</sub>-alkoxy group,

whilst by the aryl moieties mentioned in the definitions of the abovementioned groups is meant a phenyl group which in each case may be monosubstituted by R<sub>12</sub>, mono- or disubstituted by R<sub>13</sub> or monosubstituted by R<sub>12</sub> and additionally mono- or disubstituted by R<sub>13</sub>, whilst the substituents may be identical or different and

R<sub>12</sub> denotes a cyano, C<sub>1-2</sub>-alkoxycarbonyl, aminocarbonyl, C<sub>1-2</sub>-alkylaminocarbonyl, di-(C<sub>1-2</sub>-alkyl)-aminocarbonyl, C<sub>1-2</sub>-alkylsulphenyl, C<sub>1-2</sub>-alkylsulphinyl, C<sub>1-2</sub>-alkylsulphonyl, hydroxy, nitro, amino, C<sub>1-2</sub>-alkylamino or di-(C<sub>1-2</sub>-alkyl)-amino, and

C l R<sub>13</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-2</sub>-alkyl, trifluoromethyl or C<sub>1-2</sub>-alkoxy group or

two groups R<sub>13</sub>, if they are bound to adjacent carbon atoms, together denote a C<sub>3-5</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

**Claim 7 (previously presented):** A compound of the formula I according to claim 5, wherein

R<sub>a</sub> denotes a hydrogen atom,

R<sub>b</sub> denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R<sub>1</sub> to R<sub>3</sub>, while

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom, or a methyl, trifluoromethyl, methoxy, ethynyl or cyano group,

$R_3$  denotes a hydrogen atom,

$R_c$  and  $R_d$  in each case denote a hydrogen atom,

X denotes a methine group substituted by a cyano group, or a nitrogen atom,

A denotes an  $-NH-$  group,

B denotes a carbonyl group,

C denotes a 1,1- or 1,2-vinylene group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group,

D denotes a  $C_{1-4}$ -alkylene group,

a  $-CO-NR_4$ -alkylene group wherein the alkylene moiety contains 2 to 4 carbon atoms, while the linking to the adjacent group C in each case must take place via the carbonyl group, wherein

$R_4$  denotes a hydrogen atom,

or, if D is bound to a carbon atom of the group E, it may also denote a bond

or, if D is bound to a nitrogen atom of the group E, it may also denote a carbonyl group,

E denotes an  $R_6O-CO$ -alkylene- $NR_5$ ,  $(R_7O-PO-OR_8)$ -alkylene- $NR_5$  or  $(R_7O-PO-R_9)$ -alkylene- $NR_5$  group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 4 carbon atoms, may additionally be substituted by one or two  $C_{1-2}$ -alkyl groups or by an  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl group, while

R<sub>5</sub> denotes a hydrogen atom,

a C<sub>1-4</sub>-alkyl group which may be substituted by an R<sub>6</sub>O-CO group,

an ethyl group optionally substituted by one or two methyl or ethyl groups which is terminally substituted by a C<sub>1-4</sub>-alkylcarbonylsulphenyl, arylcarbonylsulphenyl or arylmethylcarbonylsulphenyl group,

an ethyl group optionally substituted by one or two methyl or ethyl groups which is terminally substituted by a hydroxy, C<sub>1-4</sub>-alkylcarbonyloxy, arylcarbonyloxy or arylmethylcarbonyloxy group,

a 2,2-dimethoxyethyl or 2,2-diethoxyethyl group,

C<sup>1</sup> a C<sub>3-6</sub>-cycloalkyl or C<sub>3-6</sub>-cycloalkyl-methyl group,

R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, in each case denote a hydrogen atom,

a C<sub>1-8</sub>-alkyl group,

a cyclopentyl, cyclopentylmethyl, cyclohexyl or cyclohexylmethyl group,

an aryl, arylmethyl or R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>) group, wherein

R<sub>e</sub> denotes a hydrogen atom or a C<sub>1-4</sub>-alkyl group,

R<sub>f</sub> denotes a hydrogen atom and

R<sub>g</sub> denotes a C<sub>1-4</sub>-alkyl, cyclopentyl, cyclohexyl, C<sub>1-4</sub>-alkoxy, cyclopentyloxy or cyclohexyloxy group,

and R<sub>9</sub> denotes a methyl or ethyl group,



a pyrrolidino or piperidino group which is substituted by an  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl group wherein  $R_6$  is as hereinbefore defined,

a pyrrolidino or piperidino group which is substituted by two  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl groups wherein  $R_6$  is as hereinbefore defined,

a piperazino group which is substituted in the 4 position by the group  $R_{10}$  and is additionally substituted at a cyclic carbon atom by an  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl group, while  $R_6$  is as hereinbefore defined and

$R_{10}$  denotes a hydrogen atom, a methyl or ethyl group,

a piperazino group which is substituted in the 4 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl or  $(R_7O-PO-OR_8)-C_{1-2}$ -alkyl group wherein  $R_6$  to  $R_8$  are as hereinbefore defined,

a piperazino group which is substituted in the 4 position by an  $R_6O-CO-C_{1-2}$ -alkyl group and is additionally substituted at a cyclic carbon atom by an  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl group wherein  $R_6$  is as hereinbefore defined,

a morpholino group which is substituted by an  $R_6O-CO$  or  $R_6O-CO-C_{1-2}$ -alkyl group, while  $R_6$  is as hereinbefore defined,

a piperidiny group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl or  $(R_7O-PO-OR_8)-C_{1-2}$ -alkyl group wherein  $R_6$  to  $R_8$  are as hereinbefore defined,

a 2-oxo-morpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups,

a 2-oxo-thiomorpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups,

a morpholino group which is substituted in the 2 position by a methoxy or ethoxy group,

a morpholino group which is substituted in the 2 and 6 positions in each case by a methoxy or ethoxy group,

a 2,2-dimethoxyethyl-NR<sub>5</sub>, 2,2-diethoxyethyl-NR<sub>5</sub>, 1,3-dioxolan-2-yl-methyl-NR<sub>5</sub> or 1,3-dioxan-2-yl-methyl-NR<sub>5</sub> group wherein R<sub>5</sub> is as hereinbefore defined,

a N-methyl-R<sub>11</sub>N or N-ethyl-R<sub>11</sub>N group wherein

R<sub>11</sub> denotes a 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl, 2-oxo-tetrahydropyran-5-yl, 2-oxo-tetrahydrothiophen-3-yl, 2-oxo-tetrahydrothiophen-4-yl, 2-oxo-tetrahydrothiopyran-3-yl, 2-oxo-tetrahydrothiopyran-4-yl or 2-oxo-tetrahydrothiopyran-5-yl group optionally substituted by one or two methyl groups,

or D together with E denotes an R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>)-O-CO or (R<sub>7</sub>O-PO-OR<sub>8</sub>) group wherein R<sub>e</sub> to R<sub>g</sub> and R<sub>7</sub> and R<sub>8</sub> are as hereinbefore defined,

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F and G together denote a hydrogen atom, a methoxy, ethoxy, C<sub>4-6</sub>-cycloalkoxy or C<sub>3-6</sub>-cycloalkyl-C<sub>1-3</sub>-alkoxy group,

while the aryl moieties mentioned in the definition of the abovementioned groups denote a phenyl group which may be mono- or disubstituted by R<sub>13</sub>, while the substituents may be identical or different and

R<sub>13</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-2</sub>-alkyl, trifluoromethyl or C<sub>1-2</sub>-alkoxy group or

two groups R<sub>13</sub>, if they are bound to adjacent carbon atoms, together denote a C<sub>3-4</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

**Claim 8 (previously presented):** A compound of the formula I according to claim 5, wherein

$R_a$  denotes a hydrogen atom,

$R_b$  denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups  $R_1$  to  $R_3$ , wherein

$R_1$  and  $R_2$ , which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom or a methyl group and

$R_3$  denotes a hydrogen atom,

$R_c$  and  $R_d$  each denote a hydrogen atom,

X denotes a methine group substituted by a cyano group, or a nitrogen atom,

C I A denotes an  $-NH-$  group,

B denotes a carbonyl group,

C denotes a 1,2-vinylene or an ethynylene group,

D denotes a  $C_{1-4}$ -alkylene group,

a  $-CO-NR_4$ -alkylene group wherein the alkylene moiety contains 2 or 3 carbon atoms, while the linking to the adjacent group C must take place via the carbonyl group wherein

$R_4$  denotes a hydrogen atom,

or, if D is bound to a nitrogen atom of the group E, it may also denote a carbonyl group,

E denotes an  $R_6O-CO$ -alkylene- $NR_5$  or  $(R_7O-PO-OR_8)$ -alkylene- $NR_5$  group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 2 carbon atoms, may additionally be substituted by a methyl group or by an  $R_6O-CO$  or  $R_6O-CO$ -methyl group, while

R<sub>5</sub> denotes a hydrogen atom,

a C<sub>1-2</sub>-alkyl group which may be substituted by an R<sub>6</sub>O-CO group,

an ethyl group optionally substituted by one or two methyl groups, which is terminally substituted by a hydroxy, C<sub>1-2</sub>-alkylcarbonylsulphenyl or C<sub>1-2</sub>-alkylcarbonyloxy group,

a 2,2-dimethoxyethyl or 2,2-diethoxyethyl group,

R<sub>6</sub> denotes a hydrogen atom,

a C<sub>1-8</sub>-alkyl group,

a cyclopentyl, cyclopentylmethyl, cyclohexyl or cyclohexylmethyl group,

CI a phenyl group optionally substituted by one or two methyl groups, a phenylmethyl group which may be substituted in the phenyl moiety by one or two methyl groups, a 5-indanyl group or an R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>) group, while

R<sub>e</sub> denotes a hydrogen atom or a methyl group,

R<sub>f</sub> denotes a hydrogen atom and

R<sub>g</sub> denotes a C<sub>1-4</sub>-alkyl or C<sub>1-2</sub>-alkoxy group,

R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, in each case denote a hydrogen atom, a methyl, ethyl or phenyl group,

a pyrrolidino or piperidino group which is substituted by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-methyl group, wherein R<sub>6</sub> is as hereinbefore defined,

a pyrrolidino or piperidino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-methyl groups wherein R<sub>6</sub> is as hereinbefore defined,

a piperazino group which is substituted in the 4 position by the group  $R_{10}$  and additionally at a cyclic carbon atom by an  $R_6O-CO$  group, while  $R_6$  is as hereinbefore defined and

$R_{10}$  denotes a hydrogen atom, a methyl or ethyl group,

a piperazino group which is substituted in the 4 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl or  $(R_7O-PO-OR_8)-C_{1-2}$ -alkyl group wherein  $R_6$  to  $R_8$  are as hereinbefore defined,

a piperazino group which is substituted in the 4 position by an  $R_6O-CO$ -methyl group and additionally at a cyclic carbon atom by an  $R_6O-CO$  group wherein  $R_6$  is as hereinbefore defined,

Cl a morpholino group which is substituted by an  $R_6O-CO$ - group, wherein  $R_6$  is as hereinbefore defined,

a 2-oxo-morpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups,

a 2-oxo-thiomorpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups,

a morpholino group which is substituted in the 2 position by a methoxy or ethoxy group,

a morpholino group which is substituted in the 2 and 6 positions in each case by a methoxy or ethoxy group,

a 2,2-dimethoxyethyl- $NR_5$ , 2,2-diethoxyethyl- $NR_5$  or 1,3-dioxolan-2-yl-methyl- $NR_5$ - group wherein  $R_5$  is as hereinbefore defined,

an N-methyl- $R_{11}N$  or N-ethyl- $R_{11}N$  group wherein

$R_{11}$  denotes a 2-oxo-tetrahydrofuran-3-yl or 2-oxo-tetrahydrofuran-4-yl group,

or D together with E denotes an  $R_g\text{CO-O-(R}_e\text{CR}_f\text{)-O-CO}$  group wherein  $R_e$  to  $R_g$  are as hereinbefore defined,

F and G together denote a hydrogen atom,

a methoxy, ethoxy,  $C_{4-6}$ -cycloalkoxy or  $C_{3-6}$ -cycloalkyl- $C_{1-3}$ -alkoxy group,

or a tautomer or salt thereof.

**Claim 9 (previously presented):** A compound of the formula I according to claim 8, wherein  $R_b$  denotes a 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups  $R_1$  to  $R_3$ , wherein

$R_1$  and  $R_2$ , which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom or a methyl group and

$R_3$  denotes a hydrogen atom,

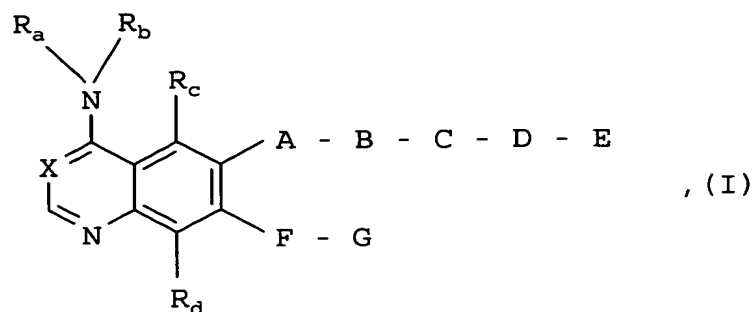
or a tautomer or salt thereof.

**Claim 10 (previously presented):** A compound of the formula I according to claim 8, wherein F and G together denote a  $C_{4-6}$ -cycloalkoxy or  $C_{3-6}$ -cycloalkyl- $C_{1-3}$ -alkoxy group,

or a tautomer or salt thereof.

**Claim 11 (previously presented):** A compound of the formula I according to claim 8, wherein E denotes a 2-oxo-morpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups, or a 2-oxo-thiomorpholino group which may be substituted by 1 to 2  $C_{1-2}$ -alkyl groups.

**Claim 12 (currently amended):** A compound of the formula



wherein

R<sub>a</sub> denotes a hydrogen atom or a C<sub>1-4</sub>-alkyl group,

R<sub>b</sub> denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R<sub>1</sub> to R<sub>3</sub>, whilst

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, in each case denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a C<sub>1-4</sub>-alkyl, hydroxy, C<sub>1-4</sub>-alkoxy, C<sub>3-6</sub>-cycloalkyl, C<sub>4-6</sub>-cycloalkoxy, C<sub>2-5</sub>-alkenyl or C<sub>2-5</sub>-alkynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a C<sub>3-5</sub>-alkenyloxy or C<sub>3-5</sub>-alkynyloxy group, wherein the unsaturated moiety may not be linked to the oxygen atom,

a C<sub>1-4</sub>-alkylsulphenyl, C<sub>1-4</sub>-alkylsulphinyl, C<sub>1-4</sub>-alkylsulphonyl, C<sub>1-4</sub>-alkylsulphonyloxy, trifluoromethylsulphenyl, trifluoromethylsulphinyl or trifluoromethylsulphonyl group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms,

an ethyl or ethoxy group substituted by 1 to 5 fluorine atoms,

a cyano or nitro group or an amino group optionally substituted by one or two C<sub>1-4</sub>-alkyl groups, wherein the substituents may be identical or different, or

R<sub>1</sub> together with R<sub>2</sub>, if they are bound to adjacent carbon atoms, denote a -CH=CH-CH=CH-, -CH=CH-NH or -CH=N-NH group and

R<sub>3</sub> denotes a hydrogen, fluorine, chlorine or bromine atom,

a C<sub>1-4</sub>-alkyl, trifluoromethyl or C<sub>1-4</sub>-alkoxy group,

R<sub>c</sub> and R<sub>d</sub>, which may be identical or different, in each case denote a hydrogen, fluorine or chlorine atom, a methoxy group, or a methyl group optionally substituted by a methoxy, dimethylamino, diethylamino, pyrrolidino, piperidino or morpholino group,

C l X denotes a methine group substituted by a cyano group or a nitrogen atom,

A denotes an oxygen atom or an -NH- group optionally substituted by a C<sub>1-4</sub>-alkyl group,

B denotes a carbonyl or sulphonyl group,

C denotes a 1,3-allenylene, 1,1 or 1,2-vinylene group which may be substituted in each case by one or two methyl groups or by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by 1 to 4 methyl groups or by a trifluoromethyl group,

D together with E denotes a hydrogen atom,

a C<sub>1-4</sub>-alkyl group optionally substituted by 1 to 5 fluorine atoms,

a C<sub>3-6</sub>-cycloalkyl group,



an aryl, heteroaryl, C<sub>1-4</sub>-alkylcarbonyl, arylcarbonyl or C<sub>1-4</sub>-alkoxycarbonyl group,

an aminocarbonyl, C<sub>1-4</sub>-alkylaminocarbonyl or di-(C<sub>1-4</sub>-alkyl)-aminocarbonyl group or

a carbonyl group, which is substituted by a 4- to 7-membered alkyleneimino group, whilst in the abovementioned 6- to 7-membered alkyleneimino groups, a methylene group in the 4 position may be replaced by an oxygen or sulphur atom, by an imino group substituted by the group R<sub>10</sub>, by a sulphinyl or sulphonyl group, wherein R<sub>10</sub> denotes a hydrogen atom, a C<sub>1-4</sub>-alkyl, formyl, C<sub>1-4</sub>-alkylcarbonyl or C<sub>1-4</sub>-alkylsulphonyl group ~~is defined as in claim 5,~~

F denotes a C<sub>1-6</sub>-alkylene group, a -O-C<sub>1-6</sub>-alkylene group, wherein the alkylene moiety is linked to the group G, or an oxygen atom, whilst the latter may not be linked to a nitrogen atom of the group G, and

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G denotes an R<sub>6</sub>O-CO-alkylene-NR<sub>5</sub>, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-alkylene-NR<sub>5</sub> or (R<sub>7</sub>O-PO-R<sub>9</sub>)-alkylene-NR<sub>5</sub>-group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 6 carbon atoms, may additionally be substituted by one or two C<sub>1-2</sub>-alkyl groups or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, wherein ~~R<sub>5</sub> to R<sub>9</sub>~~ are defined as in claim 5,

R<sub>5</sub> denotes a hydrogen atom,

a C<sub>1-4</sub>-alkyl group, which may be substituted by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>) or (R<sub>7</sub>O-PO-R<sub>9</sub>) group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups, which may be terminally substituted in each case by a C<sub>1-6</sub>-alkylcarbonylsulphenyl, C<sub>3-7</sub>-cycloalkylcarbonylsulphenyl, C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonylsulphenyl, arylcarbonylsulphenyl or aryl-C<sub>1-3</sub>-alkylcarbonylsulphenyl group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups which may be terminally substituted in each case by a C<sub>1-6</sub>-alkylcarbonyloxy, C<sub>3-7</sub>-cycloalkylcarbonyloxy, C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkylcarbonyloxy, arylcarbonyloxy or aryl-C<sub>1-3</sub>-alkylcarbonyloxy group,

an ethyl or propyl group optionally substituted by one or two methyl or ethyl groups, each of which may be terminally substituted by a hydroxy, C<sub>1-4</sub>-alkoxy, amino, C<sub>1-4</sub>-alkylamino or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, whilst in the abovementioned 6- to 7-membered alkyleneimino groups a methylene group in the 4 position may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, imino or N-(C<sub>1-4</sub>-alkyl)-imino group,

a C<sub>3-7</sub>-cycloalkyl or C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkyl group,

R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, in each case denote a hydrogen atom,

a C<sub>1-8</sub>-alkyl group, which may be substituted by a hydroxy, C<sub>1-4</sub>-alkoxy, amino, C<sub>1-4</sub>-alkylamino or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, whilst in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group in the 4 position may be replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl, imino or N-(C<sub>1-4</sub>-alkyl)-imino group,

a C<sub>4-7</sub>-cycloalkyl group optionally substituted by 1 or 2 methyl groups,

a C<sub>3-5</sub>-alkenyl or C<sub>3-5</sub>-alkynyl group, wherein the unsaturated part may not be linked to the oxygen atom,

a C<sub>3-7</sub>-cycloalkyl-C<sub>1-4</sub>-alkyl, aryl, aryl-C<sub>1-4</sub>-alkyl or R<sub>g</sub>CO-O-(R<sub>e</sub>CR<sub>f</sub>)-group, whilst

R<sub>e</sub> and R<sub>f</sub>, which may be identical or different, in each case denote a hydrogen atom or a C<sub>1-4</sub>-alkyl group and

R<sub>g</sub> denotes a C<sub>1-4</sub>-alkyl, C<sub>3-7</sub>-cycloalkyl, C<sub>1-4</sub>-alkoxy or C<sub>5-7</sub>-cycloalkoxy group,

and R<sub>9</sub> denotes a C<sub>1-4</sub>-alkyl, aryl or aryl-C<sub>1-4</sub>-alkyl group,

a 4- to 7-membered alkyleneimino group which is substituted by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as in claim 5 as set forth previously in this claim,

a 4- to 7-membered alkyleneimino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim 5 as set forth previously in this claim,

a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and is additionally substituted at a cyclic carbon atom by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>10</sub> are defined as in claim 5 as set forth previously in this claim,

C<sup>1</sup>  
a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and is additionally substituted at cyclic carbon atoms by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> and R<sub>10</sub> are defined as in claim 5 as set forth previously in this claim,

a piperazino or homopiperazino group which is substituted in each case in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as in claim 5 as set forth previously in this claim,

a piperazino or homopiperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group and is additionally substituted at cyclic carbon atoms by one or two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as in claim 5 as set forth previously in this claim,

a morpholino or homomorpholino group which is substituted in each case by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-

C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as ~~in claim 5~~ set forth previously in this claim,

a morpholino or homomorpholino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is defined as ~~in claim 5~~ set forth previously in this claim,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group R<sub>10</sub>, whilst the abovementioned 5- to 7-membered rings are in each case additionally substituted at a carbon atom by an R<sub>6</sub>O-CO, (R<sub>7</sub>O-PO-OR<sub>8</sub>), (R<sub>7</sub>O-PO-R<sub>9</sub>), R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>10</sub> are defined as ~~in claim 5~~ set forth previously in this claim,

C<sup>1</sup> a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group R<sub>10</sub>, while the abovementioned 5- to 7-membered rings are in each case additionally substituted at carbon atoms by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> and R<sub>10</sub> are defined as ~~in claim 5~~ set forth previously in this claim,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as ~~in claim 5~~ set forth previously in this claim,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group, while the abovementioned 5- to 7-membered rings are in each case additionally substituted at carbon atoms by one or two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups or by an R<sub>6</sub>O-CO-group and an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as ~~in claim 5~~ set forth previously in this claim,

a 2-oxo-morpholino group which may be substituted by 1 or 2 methyl groups,

a 2-oxo-morpholinyl group which is substituted in the 4 position by a hydrogen atom, by a C<sub>1-4</sub>-alkyl, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group,

while R<sub>6</sub> to R<sub>9</sub> are defined as in claim 1 and the abovementioned 2-oxo-morpholinyl groups are in each case linked to a carbon atom of the group F,

a morpholino or thiomorpholino group which is substituted in the 2 position by a C<sub>1-4</sub>-alkoxy group,

a morpholino or thiomorpholino group which is substituted in the 2 and 6 position by a C<sub>1-4</sub>-alkoxy group,

a C<sub>1-4</sub>-alkyl-NR<sub>5</sub>-group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained and may additionally be substituted by one or two methyl groups, is in each case terminally substituted by a di-(C<sub>1-4</sub>-alkoxy)-methyl or tri-(C<sub>1-4</sub>-alkoxy)-methyl group, whilst R<sub>5</sub> is defined as in claim 5 set forth previously in this claim,

C1 | a C<sub>1-4</sub>-alkyl-NR<sub>5</sub>-group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained and may additionally be substituted by one or two methyl groups, is terminally substituted in each case by a 1,3-dioxolan-2-yl or 1,3-dioxan-2-yl-group optionally substituted by one or two methyl groups, while R<sub>5</sub> is defined as in claim 5 set forth previously in this claim,

an R<sub>h</sub>NR<sub>5</sub>-group wherein R<sub>5</sub> is as hereinbefore defined and R<sub>h</sub> denotes a 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl or 2-oxo-tetrahydropyran-5-yl group optionally substituted by one or two methyl groups,

whilst by the aryl moieties mentioned in the definitions of the abovementioned groups is meant a phenyl group which in each case may be monosubstituted by R<sub>12</sub>, mono-, di- or trisubstituted by R<sub>13</sub> or monosubstituted by R<sub>12</sub> and additionally mono- or disubstituted by R<sub>13</sub>, whilst the substituents may be identical or different and

R<sub>12</sub> denotes a cyano, carboxy, C<sub>1-4</sub>-alkoxycarbonyl, aminocarbonyl, C<sub>1-4</sub>-alkylaminocarbonyl, di-(C<sub>1-4</sub>-alkyl)-aminocarbonyl, C<sub>1-4</sub>-alkylsulphenyl, C<sub>1-4</sub>-alkylsulphinyl, C<sub>1-4</sub>-alkylsulphonyl, hydroxy, C<sub>1-4</sub>-alkylsulphonyloxy, trifluoromethyloxy, nitro, amino, C<sub>1-4</sub>-alkylamino, di-(C<sub>1-4</sub>-alkyl)-amino, C<sub>1-4</sub>-alkyl-carbonylamino, N-(C<sub>1-4</sub>-alkyl)-C<sub>1-4</sub>-alkylcarbonylamino, C<sub>1-4</sub>-alkylsulphonylamino,

N-(C<sub>1-4</sub>-alkyl)-C<sub>1-4</sub>-alkylsulphonylamino, aminosulphonyl, C<sub>1-4</sub>-alkylaminosulphonyl or di-(C<sub>1-4</sub>-alkyl)-aminosulphonyl group or a carbonyl group, which is substituted by a 5- to 7-membered alkyleneimino group, wherein in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group in the 4 position may be replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl, imino or N-(C<sub>1-4</sub>-alkyl)-imino group, and

R<sub>13</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-4</sub>-alkyl, trifluoromethyl or C<sub>1-4</sub>-alkoxy group or

two groups R<sub>13</sub>, if they are bound to adjacent carbon atoms, together denote a C<sub>3,5</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

C1 and moreover, the heteroaryl groups mentioned in the definitions of the abovementioned groups also include a 5-membered heteroaromatic group which contains an imino group, an oxygen or sulphur atom or an imino group, an oxygen or sulphur atom and one or two nitrogen atoms, or

a 6-membered heteroaromatic group which contains one, two or three nitrogen atoms,

whilst the abovementioned 5-membered heteroaromatic groups may be substituted in each case by 1 or 2 methyl or ethyl groups and the abovementioned 6-membered heteroaromatic groups may be substituted in each case by 1 or 2 methyl or ethyl groups or by a fluorine, chlorine, bromine or iodine atom, or by a trifluoromethyl, hydroxy, methoxy or ethoxy group,

or a tautomer or salt thereof.

**Claim 13 (currently amended):** A compound of the formula I according to claim 12, wherein

R<sub>a</sub> denotes a hydrogen atom,

R<sub>b</sub> denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R<sub>1</sub> to R<sub>3</sub>, while

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, each denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a methyl, ethyl, hydroxy, methoxy, ethoxy, amino, cyano, vinyl or ethynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms or

R<sub>1</sub> together with R<sub>2</sub>, if they are bound to adjacent carbon atoms, denote a -CH=CH-CH=CH-, -CH=CH-NH or -CH=N-NH group and

R<sub>3</sub> denotes a hydrogen, fluorine, chlorine or bromine atom,

C I  
R<sub>c</sub> and R<sub>d</sub> in each case denote a hydrogen atom,

X denotes a methine group substituted by a cyano group or a nitrogen atom,

A denotes an -NH- group optionally substituted by a methyl or ethyl group,

B denotes a carbonyl group,

C denotes a 1,1- or 1,2-vinylene group which is substituted in each case by one or two methyl groups or may be substituted by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

D together with E denotes a hydrogen atom,

a methyl, trifluoromethyl or aryl group,

F denotes an -O-C<sub>1-4</sub>-alkylene group, wherein the alkylene moiety is linked to the group G, or an oxygen atom, while this may not be linked to a nitrogen atom of the group G, and

G denotes an R<sub>6</sub>O-CO-alkylene-NR<sub>5</sub>, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-alkylene-NR<sub>5</sub> or (R<sub>7</sub>O-PO-R<sub>9</sub>)-alkylene-NR<sub>5</sub> group wherein in each case the alkylene moiety, which is straight-chained and contains 1 to 4 carbon atoms, may additionally be substituted by one or two C<sub>1-2</sub>-alkyl groups or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while R<sub>5</sub> to R<sub>9</sub> are defined as in claim 512,

a 4- to 7-membered alkyleneimino group which is substituted by an R<sub>6</sub>O-CO, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim 512,

a 4- to 7-membered alkyleneimino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups wherein R<sub>6</sub> is defined as in claim 512,

C1 a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and is additionally substituted at a cyclic carbon atom by an R<sub>6</sub>O-CO, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> and R<sub>10</sub> are defined as in claim 512,

a piperazino or homopiperazino group which is substituted in the 4 position by the group R<sub>10</sub> and is additionally substituted at cyclic carbon atoms by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups wherein R<sub>6</sub> and R<sub>10</sub> are defined as in claim 512,

a piperazino or homopiperazino group which is substituted in each case in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl, (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-R<sub>9</sub>)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> to R<sub>9</sub> are defined as in claim 512,

a piperazino or homopiperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group and additionally at cyclic carbon atoms by one or two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl groups wherein R<sub>6</sub> is defined as in claim 512,

a morpholino or homomorpholino group which is substituted in each case by an R<sub>6</sub>O-CO, R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl or bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim 512,



a morpholino or homomorpholino group which is substituted by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  is defined as in claim 512,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , while the abovementioned 5- to 7-membered rings in each case are additionally substituted at a carbon atom by an  $R_6O-CO$ ,  $R_6O-CO-C_{1-4}$ -alkyl or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group wherein  $R_6$  and  $R_{10}$  are defined as in claim 512,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by the group  $R_{10}$ , while the abovementioned 5- to 7-membered rings in each case are additionally substituted at carbon atoms by two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  and  $R_{10}$  are defined as in claim 512,

C1 a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl, bis- $(R_6O-CO)-C_{1-4}$ -alkyl,  $(R_7O-PO-OR_8)-C_{1-4}$ -alkyl or  $(R_7O-PO-R_9)-C_{1-4}$ -alkyl group wherein  $R_6$  to  $R_9$  are defined as in claim 512,

a pyrrolidinyl, piperidinyl or hexahydroazepinyl group substituted in the 1 position by an  $R_6O-CO-C_{1-4}$ -alkyl or bis- $(R_6O-CO)-C_{1-4}$ -alkyl group, while the abovementioned 5- to 7-membered rings in each case are additionally substituted at carbon atoms by one or two  $R_6O-CO$  or  $R_6O-CO-C_{1-4}$ -alkyl groups wherein  $R_6$  is defined as in claim 512,

a 2-oxo-morpholino group which may be substituted by 1 or 2 methyl groups,

a 2-oxo-morpholinyl group which is substituted in the 4 position by a  $C_{1-4}$ -alkyl or  $R_6O-CO-C_{1-4}$ -alkyl group, while  $R_6$  is defined as in claim 2 and the abovementioned 2-oxo-morpholinyl groups are each are linked to a carbon atom of the group F,

a morpholino group which is substituted in the 2 position by a  $C_{1-4}$ -alkoxy group,

a morpholino group which is substituted in the 2 and 6 positions in each case by a  $C_{1-4}$ -alkoxy group,

a C<sub>1-4</sub>-alkyl-NR<sub>5</sub> group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained, is terminally substituted by a di-(C<sub>1-4</sub>-alkoxy)-methyl group, while R<sub>5</sub> is defined as in claim 512,

a C<sub>1-4</sub>-alkyl-NR<sub>5</sub> group wherein the C<sub>1-4</sub>-alkyl moiety, which is straight-chained, is terminally substituted by a 1,3-dioxolan-2-yl or 1,3-dioxan-2-yl group, while R<sub>5</sub> is defined as in claim 512,

a R<sub>h</sub>NR<sub>5</sub> group wherein R<sub>5</sub> is defined as in claim 2 and R<sub>h</sub> denotes a substituted 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl or 2-oxo-tetrahydropyran-5-yl group optionally by one or two methyl groups,

while the aryl moieties mentioned in the definition of the abovementioned groups denote a phenyl group which may in each case be monosubstituted by R<sub>12</sub>, mono- or disubstituted by R<sub>13</sub> or monosubstituted by R<sub>12</sub> and additionally mono or disubstituted by R<sub>13</sub>, while the substituents may be identical or different and

R<sub>12</sub> denotes a cyano, C<sub>1-2</sub>-alkoxycarbonyl, aminocarbonyl, C<sub>1-2</sub>-alkylaminocarbonyl, di-(C<sub>1-2</sub>-alkyl)-aminocarbonyl, C<sub>1-2</sub>-alkylsulphenyl, C<sub>1-2</sub>-alkylsulphinyl, C<sub>1-2</sub>-alkylsulphonyl, hydroxy, nitro, amino, C<sub>1-2</sub>-alkylamino or di-(C<sub>1-2</sub>-alkyl)-amino group and

R<sub>13</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-2</sub>-alkyl, trifluoromethyl or C<sub>1-2</sub>-alkoxy group or

two groups R<sub>13</sub>, if they are bound to adjacent carbon atoms, together denote a C<sub>3-5</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

**Claim 14 (currently amended):** A compound of the formula I according to claim 12, wherein

R<sub>a</sub> denotes a hydrogen atom,

$R_b$  denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups  $R_1$  to  $R_3$ , while

$R_1$  and  $R_2$ , which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom, or a methyl, trifluoromethyl, methoxy, ethynyl or cyano group,

$R_3$  denotes a hydrogen atom,

$R_c$  and  $R_d$  in each case denote a hydrogen atom,

$X$  denotes a methine group substituted by a cyano group, or a nitrogen atom,

C I  $A$  denotes an  $-NH-$  group,

$B$  denotes a carbonyl group,

$C$  denotes a 1,1- or 1,2-vinylene group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group,

$D$  together with  $E$  denotes a hydrogen atom,

a methyl, trifluoromethyl or aryl group,

$F$  denotes an  $-O-C_{1-4}$ -alkylene group, wherein the alkylene moiety is linked to the group  $G$ , or an oxygen atom, while this may not be linked to a nitrogen atom of the group  $G$ , and

$G$  denotes an  $R_6O-CO$ -alkylene- $NR_5$  group wherein the alkylene moiety, which is straight-chained and contains 1 to 4 carbon atoms, may additionally be substituted by one or two

C<sub>1-2</sub>-alkyl groups or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while R<sub>5</sub> and R<sub>6</sub> are defined as in claim 512,

a pyrrolidino or piperidino group which is substituted by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim 512,

a pyrrolidino or piperidino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl groups wherein R<sub>6</sub> is defined as in claim 512,

a piperazino group which is substituted in the 4 position by the group R<sub>10</sub> and additionally at a cyclic carbon atom by an R<sub>6</sub>O-CO, or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while R<sub>6</sub> and R<sub>10</sub> are defined as in claim 512,

C | a piperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> to R<sub>8</sub> are defined as in claim 512,

a piperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group and additionally at a cyclic carbon atom by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim 512,

a morpholino group which is substituted by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while R<sub>6</sub> is defined as in claim 512,

a piperidinyl group substituted in the 1 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> to R<sub>8</sub> are defined as in claim 512,

a 2-oxo-morpholino group which may be substituted by 1 or 2 methyl groups,

a 2-oxo-morpholinyl group which is substituted in the 4 position by a methyl, ethyl or R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group, while R<sub>6</sub> is defined as in claim 3 and the abovementioned 2-oxo-morpholinyl groups in each case are linked to a carbon atom of the group F,

a morpholino group which is substituted in the 2 position by a methoxy or ethoxy group,

a morpholino group which is substituted in the 2 and 6 positions in each case by a methoxy or ethoxy group,

a 2,2-dimethoxyethyl-NR<sub>5</sub>, 2,2-diethoxyethyl-NR<sub>5</sub>, 1,3-dioxolan-2-yl-methyl-NR<sub>5</sub> or 1,3-dioxan-2-yl-methyl-NR<sub>5</sub> group wherein R<sub>5</sub> is defined as in claim 512,

while the aryl moieties mentioned in the definition of the abovementioned groups denote a phenyl group which may be mono- or disubstituted by R<sub>13</sub>, while the substituents may be identical or different and

R<sub>13</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-2</sub>-alkyl, trifluoromethyl or C<sub>1-2</sub>-alkoxy group or

two groups R<sub>13</sub>, if they are bound to adjacent carbon atoms, together denote a C<sub>3-4</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

**Claim 15 (currently amended):** A compound of the formula I according to claim 12, wherein

R<sub>a</sub> denotes a hydrogen atom,

R<sub>b</sub> denotes a phenyl, benzyl or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R<sub>1</sub> to R<sub>3</sub>, wherein

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom or a methyl group and

R<sub>3</sub> denotes a hydrogen atom,

R<sub>c</sub> and R<sub>d</sub> each denote a hydrogen atom,

X denotes a methine group substituted by a cyano group, or a nitrogen atom,

A denotes an -NH- group,

B denotes a carbonyl group,

C denotes a 1,2-vinylene or an ethynylene group,

D together with E denotes a hydrogen atom or a methyl group,

F denotes an -O-C<sub>1-4</sub>-alkylene group, while the alkylene moiety is linked to the group G, or an oxygen atom, which may not be linked to a nitrogen atom of the group G, and

G denotes an R<sub>6</sub>O-CO-alkylene-NR<sub>5</sub> group wherein the alkylene moiety, which is straight-chained and contains 1 or 2 carbon atoms, may additionally be substituted by a methyl group or by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-methyl group, while R<sub>5</sub> and R<sub>6</sub> are defined as in claim §12,

a pyrrolidino or piperidino group which is substituted by an R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-methyl group wherein R<sub>6</sub> is defined as in claim §12,

a pyrrolidino or piperidino group which is substituted by two R<sub>6</sub>O-CO or R<sub>6</sub>O-CO-methyl groups wherein R<sub>6</sub> is defined as in claim §12,

a piperazino group which is substituted in the 4 position by an R<sub>6</sub>O-CO-C<sub>1-4</sub>-alkyl, bis-(R<sub>6</sub>O-CO)-C<sub>1-4</sub>-alkyl or (R<sub>7</sub>O-PO-OR<sub>8</sub>)-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> to R<sub>8</sub> are defined as in claim §12,

a piperidinyll group substituted in the 1 position by an R<sub>6</sub>O-CO-C<sub>1-2</sub>-alkyl group wherein R<sub>6</sub> is defined as in claim §12,

or a tautomer or salt thereof.

**Claim 16 (previously presented):** A compound of the formula I according to claim 15, wherein R<sub>b</sub> denotes a 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R<sub>1</sub> to R<sub>3</sub>, wherein

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, each denote a hydrogen, fluorine, chlorine or bromine atom or a methyl group and

R<sub>3</sub> denotes a hydrogen atom,

or a tautomer or salt thereof.

**Claim 17 (previously presented):** A compound selected from the group consisting of:

(a) 4-[(3-bromophenyl)amino]-7-(3-{4-[(ethoxycarbonyl)methyl]-piperazin-1-yl}propyloxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(b) 4-[(3-bromophenyl)amino]-7-(3-{4-[3-(ethoxycarbonyl)propyl]-piperazin-1-yl}propyloxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(c) 4-[(3-bromophenyl)amino]-7-({1-[(ethoxycarbonyl)methyl]-piperidin-4-yl}oxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(d) 4-[(3-bromophenyl)amino]-7-(3-{4-[(diethoxyphosphoryl)methyl]-piperazin-1-yl}propyloxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(e) 4-[(3-bromophenyl)amino]-7-(3-{N-[(ethoxycarbonyl)methyl]-N-methylamino}propyloxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(f) 4-[(3-bromophenyl)amino]-6-[(4-{N-[(ethoxycarbonyl)methyl]-N-methylamino}-1-oxo-2-buten-1-yl)amino]-quinazoline,

(g) 4-[(3-bromophenyl)amino]-6-[(4-{N-[(diethoxyphosphoryl)methyl]-N-methylamino}-1-oxo-2-buten-1-yl)amino]-7-methoxy-quinazoline,

(h) (*R*)-4-[(1-phenylethyl)amino]-6-[(4-{N-[(ethoxycarbonyl)methyl]-N-methylamino}-1-oxo-2-buten-1-yl)amino]-7-methoxy-quinazoline,

(i) 4-[(3-bromophenyl)amino]-6-({4-[N-(2,2-dimethoxyethyl)-N-methylamino]-1-oxo-2-buten-1-yl}amino)-7-methoxy-quinazoline,

(j) 4-[(3-bromophenyl)amino]-6-{[4-(2-ethoxy-morpholin-4-yl)-1-oxo-2-buten-1-yl]amino}-7-methoxy-quinazoline,

(k) 4-[(3-bromophenyl)amino]-3-cyano-6-[(4-{N-[(ethoxycarbonyl)methyl]-N-methylamino}-1-oxo-2-buten-1-yl)amino]-quinoline,

(l) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{4-[(ethoxycarbonyl)methyl]-piperazin-1-yl}-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxy-quinazoline,

(m) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{N-[2-(ethoxycarbonyl)-ethyl]-N-[(ethoxycarbonyl)methyl]amino}-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxy-quinazoline,

(n) 4-[(3-chloro-4-fluorophenyl)amino]-6-{[4-(2-oxo-morpholin-4-yl)-1-oxo-2-buten-1-yl]amino}-7-cyclopropylmethoxy-quinazoline,

(o) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{4-[(ethoxycarbonyl)methyl]-piperazin-1-yl}-1-oxo-2-buten-1-yl)amino]-7-cyclobutylmethoxy-quinazoline,

(p) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{4-[(ethoxycarbonyl)methyl]-piperazin-1-yl}-1-oxo-2-buten-1-yl)amino]-7-(2-cyclopropylethoxy)-quinazoline,

(q) (*S*)-4-[(3-chloro-4-fluorophenyl)amino]-6-({4-[2-(methoxycarbonyl)-pyrrolidin-1-yl]-1-oxo-2-buten-1-yl}amino)-7-cyclopropylmethoxy-quinazoline,



(r) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{N-[(ethoxycarbonyl)methyl]-N-[2-(acetylsulphanyl)ethyl]amino}-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxy-quinazoline, and

(s) 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-{N-[(ethoxycarbonyl)-methyl]-N-[2-(methylcarbonyloxy)ethyl]amino}-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxy-quinazoline,  
or a salt thereof.

**Claim 18 (previously presented):** A physiologically acceptable salt of a compound according to claim 5.

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**Claim 19 (previously presented):** A pharmaceutical composition comprising a compound according to claim 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 or 17 or a physiologically acceptable salt thereof and a pharmaceutically acceptable carrier or diluent.

**Claim 20 (previously presented):** A method for treating a benign or malignant tumour, a disease of the airways or lungs, polyps, a disease of the gastrointestinal tract, the bile duct or the gall bladder, kidneys or skin, which method comprises administering a therapeutically effective amount of a compound according to claim 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 or 17 or a physiologically acceptable salt thereof.

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